REMARKS

Claims 1-23 were pending in the present application. Claims 1-10, 13-18 and 20-23 were rejected. Claims 11, 12 and 19 are objected to. By this Amendment, claims 1, 11, 13, 19, 20, 21, 22, and 23 have been amended, and new claims 24-26 have been added. This application now includes claims 1-26.

Applicant thanks the Examiner for the indication that claims 11, 12 and 19 contain allowable subject matter, and would be allowable if rewritten in independent form to include all the limitations of the base claim and any intervening claim. Applicant has so amended claims 11 and 19. Claim 12 depends from claim 11. Accordingly, claims 11, 12 and 19 are believed to be in condition for allowance.

Reconsideration of the rejection of claims 1-10, 13-18 and 20-23 is respectfully requested.

Claims 1-4, 13-16 and 22-23 were rejected under 35 U.S.C. §102(b) as being anticipated by Scherl, et al. (U.S. Patent No. 4,411,015; hereinafter, Scherl). Applicant thanks the Examiner for the clarification of the Examiner's interpretation of Scherl.

Claim 1 has been amended to clarify that a concentration ratio for the image "indicates a relative level of smoothness of a distribution of a population of elements in the image". (Emphasis added). Support for the amendment of claim 1 may be found in Applicant's Specification at paragraphs 35 and 36, and the Abstract.

As set forth in Applicant's Abstract, for example, a concentration ratio "indicates the smoothness of the distribution of a population of elements in the image…" As also set forth in Applicant's Specification at paragraph 0036, "in some embodiments of the invention, when a smooth image or, more specifically, a smooth tile is detected, the amount of equalization or enhancement is reduced. Smoothness of an image or specific tile may be determined using a concentration ratio ("CR")." As also set forth in Applicant's Specification at paragraph 0035, "In

general, grainy images are produced when what is called a "smooth" image (i.e., an image with few gray levels) is processed by histogram equalization."

Turning again to Applicant's specification at paragraph 0036, "A CR is a number that indicates how concentrated or widespread the population of elements is, such as, for example, how wide spread the distribution of a histogram is. Generally, if the population is distributed evenly across all levels, the CR is a large number. Likewise, if the entire population is concentrated at a few levels, the CR is generally a small number." (Emphasis added). Thus, in context, the concentration ratio for the image indicates a relative level of smoothness of a distribution of a population of elements in the image, which is not the case with Scherl.

In the Examiner's example at pages 14 and 15 of the present Office Action, the variable K of Scherl was considered to show how widespread the population of elements was. However, it is respectfully submitted that the variable K of Scherl (see the equation for determining (K) in Scherl at column 3, line 20) does not indicate a relative level of smoothness of a distribution of a population of elements in the image, as recited in claim 1 as amended, as demonstrated by the examples that follow.

Example 1: In Scherl, i_{max} is the maximum brightness value. Assume that in the brightness range 0.8 i_{max} to i_{max} the brightness values are in a range of 0 to 255. Assume that there are 10 values of level 240 and 10 values of level 250 (wherein 0.8 i_{max} = 204), and 80 values of level 20, and thus N=100. In this case, K = 20/100, or **20 percent**.

Example 2: In Scherl, i_{max} is the maximum brightness value. Assume that in the brightness range 0.8 i_{max} to i_{max} the brightness values are in a range of 0 to 255. Assume that there are 10 values of level 240 and 10 values of level 250 (wherein 0.8 i_{max} = 204), and 80 values of level 190, and thus N=100. However, in this case also, K = 20/100, or **20 percent**.

Thus, in comparing Examples 1 and 2 above, <u>K is the same value</u>, regardless of the values of the 80 percent of values that are less than 0.8 i_{max}. In terms of smoothness of the image, however, the range of elements of Example 2 is much more smooth than in Example 1, since the 80 percent of the values at level 190 are much closer to the levels 240 and 250 (as in Example 2) then the 80 percent of the values at level 20 is to the levels 240 and 250 (Example 1). Thus, in Scherl the variable K <u>is not</u> a concentration ratio that indicates the smoothness of the distribution of a population of elements in the image.

As an exemplary comparison, as stated in Applicant's specification at paragraph 0036, "Generally, if the population <u>is distributed evenly across **all levels**</u>, the **CR [i.e., concentration ratio] is a large number**. Likewise, if the entire population is <u>concentrated at a **few levels**</u>, the **CR is generally a small number**." (Emphasis added). This is because in claim 1 the concentration ratio indicates the smoothness of the distribution of a population of elements in the image, whereas in Scherl the variable K does not.

Accordingly, for at least the reasons set forth above, it is respectfully submitted that claim 1 as amended is not anticipated by Scherl under 35 U.S.C. §102(b), and is allowable in its present form.

Claims 2-4 are believed allowable due to their dependence from base claim 1.

Independent claim 13 as amended is believed allowable for substantially the same reasons set forth above with respect to claim 1.

Claims 14-16 are believed allowable due to their dependence from base claim 13.

Independent claim 22 as amended is believed allowable for substantially the same reasons set forth above with respect to claim 1.

Independent claim 23 as amended is believed allowable for substantially the same reasons set forth above with respect to claim 1.

Accordingly, for at least the reasons set forth above, it is respectfully requested that the rejection of claims 1-4, 13-16 and 22-23 as being anticipated by Scherl, et al. under 35 U.S.C. §102(b) be withdrawn.

Claims 5-10 and 17-18 were rejected under 35 U.S.C. §103(a) as being unpatentable over Scherl in view of Hartmann, et al. (U.S. Pub. No. 2002/0067857 A1; hereinafter, Hartmann).

Claims 5-10 depend, directly or indirectly, from base claim 1. Claims 5-10 are believed allowable in their present form, since Hartmann does not overcome the deficiencies of Scherl with respect to claim 1.

Claims 17 and 18 depend from base claim 13. Claims 17 and 18 are believed allowable in their present form, since Hartmann does not overcome the deficiencies of Scherl with respect to claim 13.

Accordingly, for at least the reasons set forth above, it is respectfully requested that the rejection of claims 5-10 and 17-18 as being unpatentable over Scherl in view of Hartmann under 35 U.S.C. §103(a) be withdrawn.

Claims 20 and 21 were rejected under 35 U.S.C. §103(a) as being unpatentable over Poggio, et al. (U.S. Patent No. 5,642,431); hereinafter, Poggio) in view of Scherl.

Claim 20 as amended recites, in part, "applying controlled, equalization to an image generated by the image capture device, where the controlled, histogram equalization uses a concentration ratio that indicates a relative level of smoothness of a distribution of a population of elements in the image." (Emphasis added).

Poggio is directed to the detection of faces, and classifies an image as a face or non-face. As set forth in Poggio, at column 4, lines 18-23, "A multi-layer perceptron (MLP) network 304, discussed in connection with FIG. 3, identifies new window patterns as faces or non-faces by taking as input a vector of distance measurements and outputting either a first state, if the vector

arises from a face pattern, or a second state, if the vector arises from a non-face pattern."

(Emphasis added). Nowhere in Poggio, however, is there any discussion of a technique that uses

a concentration ratio, as recited in claim 20.

The Examiner asserts that Scherl discloses a concentration ratio. However, as set forth

above with respect to claim 1, Scherl does not disclose, teach or suggest, "a concentration ratio

that indicates a relative level of smoothness of a distribution of a population of elements in the

image", as recited in claim 20.

Accordingly, the combination of Poggio and Scherl would not render claim 20 obvious.

Independent claim 21, as amended, recites in part, "a controlled, equalization processor

coupled to the image capture device, that uses a concentration ratio that indicates a relative level

of smoothness of a distribution of a population of elements in the image." (Emphasis added).

Claim 21 is believed allowable for substantially the same reasons set forth above with

respect to claim 20.

Accordingly, for at least the reasons set forth above, it is respectfully requested that the

rejection of claims 20 and 21 as being unpatentable over Poggio in view of Scherl under 35

U.S.C. §103(a) be withdrawn.

New claims 24, 25 and 26 have been added.

Claim 24 is believed allowable in view of its dependence from claim 20, and further is

believed allowable in its own right for the reasons relating to the indication of allowable subject

matter of objected to claims 11, 12 and 19.

Claim 25 is believed allowable in view of its dependence from claim 21, and further is

believed allowable in its own right for the reasons relating to the indication of allowable subject

matter of objected to claims 11, 12 and 19.

Claim 26 is believed allowable in view of its dependence from claim 22, and further is believed allowable in its own right for the reasons relating to the indication of allowable subject matter of objected to claims 11, 12 and 19.

For the foregoing reasons, Applicant believes that the present application is in condition for allowance in its present form, and it is respectfully requested that the Examiner so find and issue a Notice of Allowance in due course.

In the event Applicant has overlooked the need for an extension of time, an additional extension of time, payment of fee, or additional payment of fee, Applicant hereby conditionally petitions therefor and authorizes that any charges be made to Deposit Account No. 20-0095, TAYLOR & AUST, P.C.

Should any question concerning any of the foregoing arise, the Examiner is invited to telephone the undersigned at (317) 894-0801.

Respectfully submitted,

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